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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,879	03/15/2004	Eric Kauffman	250050US6YA	8333
22850	7590	01/06/2010		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.				
1940 DUKE STREET				
ALEXANDRIA, VA 22314				
EXAMINER				
SHEIKH, ASFAND M				
ART UNIT		PAPER NUMBER		
3627				
NOTIFICATION DATE		DELIVERY MODE		
01/06/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/799,879

**Applicant(s)**

KAUFFMAN ET AL.

**Examiner**

Asfand M. Sheikh

**Art Unit**

3627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

Applicant's arguments with respect to claims 1, 17, and 18 have been considered but are moot in view of the new ground(s) of rejection.

***Official Notice***

The applicant has not traversed the Official Notice taken by the examiner with respect to claims 3-6, 8-11, and 13 in the Office Action mailed on 12/31/2008 therefore the examiner notes the subject matter of the Official Notice and how they apply to the respective claims are admitted to be known prior art.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7, 12, 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,697,691 B1) in view of Schleiss et al. (US 6,633,782 B1).

Claim 1, 2, 7, 12, 14-20

Miller discloses a **fault correction method implemented by a computer system** for correcting a fault in a process tool for semiconductor manufacturing (see at least, abstract and FIG. 5) comprising: **storing in memory of a computer system** old service activity data for old faults in said process tools (see at least, col. 2, lines 5-12 and col. 6, lines 19-40: the examiner notes fault detection model data is interpreted to be old service activity data); receiving new service activity data for new fault in said process tool comparing said new service activity data to said old service activity data (see at least, col. 2, lines 5-12 and col. 6, lines 19-40: the examiner notes received production data is interpreted to be new service activity data and finding a difference between the data); identifying matching service activity data from said comparison (see at least, FIG 5: the examiner notes identifying probable cause(s) of failure) **and displaying the matching service activity data to a service operator** (see at least, col. 6, lines 64-col. 7, lines 1-10: the examiner notes a computer message is a display of service activity data to a service operator ) **who performs at least one of a corrective action on a process tool** based on said matching service activity data (see at least, col. 7, lines 10-30: the examiner notes a lamps can be changed or tools can be recalibrated are interpreted to be identifying a service activity from the comparison of data and FIG. 5).

Further Miller discloses [claim 2 and 19] **said corrective action comprises** performing one or more tests on said process tool using said matching service activity **data, and said updating comprises generating** new matching service activity data,

wherein said new matching service activity data narrows said matching service activity data (see at least, col. 7, lines 31-40: the examiner notes further comparisons of production data files against fault detection modules are performed until all are exhausted and then performing correction (see FIG. 5)) and [claim 7] wherein said performing said corrective action includes replacing one or more manufacturing (MS) part in said process tool (see at least, col. 7, lines 10-30: the examiner notes a lamps can be changed or tools can be recalibrated are interpreted to be identifying a service activity from the comparison of data and FIG. 5) and [claim 12 and 20] wherein said collecting said old service activity data for said process tool includes collecting old service activity data for at least a thermal system (see at least, col. 7, lines 10-30: the examiner notes by being able to correct for lamps in rapid thermal process, thermal activity data would have to be collected and used for said comparison of data) and [claim 14]: wherein performing a correction action comprises providing service action data to a service operator to assist the service operation in correcting said fault in said process tool (see at least, col. 6, lines 65-col. 7, lines 10) and [claim 15] wherein said performing a corrective action comprises isolating said fault in said process tool (see at least, col. 6, lines 65-col. 7, lines 30).

Miller fails to disclose **receiving additional new service activity data relating to the new fault based on a result of the corrective action; and updating the matching service activity data based on the additional new service activity data such that the service operator performing the corrective action builds a database**

**of cases as corrective actions are performed or completed to correct the new fault.**

However Schleiss discloses a database that stores historical operational problems and the corrective actions thereby building a database for use in an expert engine in order to analyze and relate operational problems to corrective actions (see at least, claim 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Miller to include a database that stores historical operational problems and the corrective actions thereby building a database for use in an expert engine in order to analyze and relate operational problems to corrective actions as taught by the Schleiss. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide a process control systems that provides automatic detection, analysis, and correction of problems existing within, devices (see at least, Schleiss, col. 1, lines 10-15).

Claims 3-6, 8-11, and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (US 6,697,691 B1) in view of Schleiss et al. (US 6,633,782 B1) as applied to the respective claim above, and further in view of Examiner's Official Notice.

Claims 3-6 and 8-11

Miller in view of Schleiss fails to disclose ranking of tests/MS part replacements according to given condition (pass/fail)/(increases/decreases).

The examiner takes Official Notice that it is old and well known in the analysis arts to provide ranked data with respect to analyzing a given set of data according to any condition based on the use of data manipulation (e.g. ranking data based on comparisons and providing data in a ranked fashion based on the comparison data more specifically as an example comparing crime between cities and then ranking crime as it increases or decreases per city in a ranked fashion).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Miller in view of Schleiss to include the features as taught by the Examiner's Official Notice for the purpose of providing data in an easy to understand manner which allows for easier interpretation of the data.

#### Claim 13

Miller in view of Schleiss fails to disclose wherein said performing a corrective action comprises automatically controlling said process tool to correct said fault therein.

The examiner takes Official Notice that it is old and well known in the automation arts to automatically take actions without user intervention to correct or adjust data (e.g. having a system automatically monitor and make changes to the system's architecture for better performance more specifically as an example having a detection system make changes to a network to increase speed and efficiency without intervention of a user).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Miller in view of Schleiss to include the

features as taught by the Examiner's Official Notice for automating corrective measures thereby increasing efficiency of the system without providing burden to an operator.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asfand M. Sheikh whose telephone number is (571)272-1466. The examiner can normally be reached on 9a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ryan M. Zeender can be reached on (571)272-6790. The fax phone



number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Asfand M. Sheikh/  
Examiner, Art Unit 3627  
January 2, 2010

/F. Ryan Zeender/  
Supervisory Patent Examiner, Art Unit 3627